

DETAILED ACTION***Status***

1. Claims 1-20, filed July 28th, 2006, are pending.

Priority

2. Applicants' claim to foreign priority of Japan Patent Applications 2004-329060, filed November 12th, 2004, 2004-135975, filed April 30th, 2004, and 2004-024687, filed January 30th, 2004, have been recorded.

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted July 28th, 2006 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner. Please refer to applicants' copy of the 1449 form submitted herewith.

Claim Rejections - 35 USC § 112 and Telephone Interview

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 6-10 and 16-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

The disclosure does not provide support for a "live pipe" as there is no mention of a "live pipe".

However, in a telephone interview with Ms. Leslie Hood on March 19th, 2009, it was confirmed that the amendments to claims 6-10 should read "line" not "live" and the new matter rejection will stand until the correction is made and affirmed in writing.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Joint Inventors

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Element	Instant	Kimura	Suzuki	US '802
C	0 – 0.01	0 – 0.02	0 – 0.03	0 – 0.02
N	0 – 0.01	0 – 0.07	0 – 0.02	0 – 0.02
Cr	10-14	10 – 14	7.5 – 14.0	10.0 – 14.0
Ni	3 - 8	0.2 – 7.0	0 - 4	2.0 - 3.0
Si	0.05 – 1.0	0 – 0.5	0.01 – 1.2	0 – 0.5
Mn	0.1 – 2.0	0.2 – 3.0	0.02 – 3.0	0.2 – 3.0
P	0 – 0.3	0 – 0.05	0 – 0.02	0 – 0.03
S	0 – 0.01	0 – 0.005	0 – 0.01	0 – 0.01
Al	0.001 – 0.10	0 – 0.1	0.005 – 0.5	n/a
Cu	0 – 4	0 – 2.0	0 – 4.0	0 – 1.0
Co	0 – 4	n/a	0 – 2.0	n/a
Mo	0 – 4	0.2 – 5.0	0 – 3.0	n/a
W	0 – 4	n/a	0 – 3.0	n/a
Ti	0 – 0.15	0 – 0.15	0 – 0.5	0 – 0.3
Nb	0 – 0.10	0 - 0.25	0 – 0.5	0 – 0.3
V	0 – 0.10	0 – 0.20	0 – 0.5	0 – 0.3
Zr	0 – 0.10	0 – 0.15	n/a	0 – 3
Hf	0 – 0.20	n/a	n/a	n/a
Ta	0 – 0.20	0 – 0.15	n/a	0 – 03
Ca	0 – 0.010	0 – 0.006	0 – 0.03	n/a
Mg	0 – 0.010	n/a	n/a	n/a
REM	0 – 0.010	n/a	0 – 0.05	n/a
B	0 – 0.01	n/a	n/a	n/a
Fe	Balance	Balance	Balance	Balance

5. **Claims 1-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kimura (US 5,985,209)**

Kimura:

Kimura discloses (col. 2, lines 35-55) a martensitic stainless steel for a line pipe with the composition as shown in the comparative table above. Steel of Kimura's disclosed composition may be formed into seamless pipe or welded pipe such as electric resistance welded steel pipe, UOE steel pipe, or spiral steel pipe (col. 5, lines 35-41). Line pipe implicitly has a heat-affected zone formed during welding. Lastly, the steel pipes of Kimura's invention are designed to undergo girth welding, to implicitly join pipes together into a welded structure for transferring oil and natural gas (col. 8, lines 32-44).

Regarding claims 1-10, it would have been obvious to one of ordinary skill in the steel tubing, at the time of the invention, to form a martensitic stainless steel pipe having a heat-affected zone with the claimed alloying elements in the claimed ranges as Kimura discloses a martensitic stainless steel for line pipe (which implicitly has a heat-affected zone when welded together to form a continuous line pipe) with overlapping ranges of the claimed elements that is disclosed as effective for the same purpose as it has been held that there the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See In re Boesch, 205 USPQ 215 (CCPA 1980). Furthermore, MPEP 2144.05, para I states: "In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists."

With respect to the compositional formulas involving C_{sol} , it is well settled that there is no invention in the discovery of a general formula if it covers a composition described in the prior art, *In re Cooper and Foley* 1943 C.D. 357,553 O.G. 177., 57 USPQ 1 17, *Taklatwalla v. Marburg*, 620 O.G. 685, 1949 C.D. 77, and *In re Pilling*, 403 O.G. 513, 44 F(2) 878, 1931 C.D. 75. In absence of evidence to the contrary, the selection of the proportions of elements would appear to require no more than routine investigation by those ordinary skilled in the art. *In re Austin, et al.* 149 USPQ 685,688. It would have been obvious to one of ordinary skill in the art to select alloy compositions fulfilling the claimed compositional relationships from the alloy compositional ranges disclosed by Kimura.

Regarding claims 11-20, it would have been obvious to one of ordinary skill in steel tubing, at the time of the invention, to form a welded structure or a welded structure further welded to a member as the steel pipes of Kimura's invention are designed to undergo girth welding, to implicitly join pipes together into a welded structure for transferring oil and natural gas (col. 8, lines 32-44) and one of ordinary skill would have welded pipes together to form such a pipeline for transporting oil and/or natural gas from Kimura. Line pipes are a welded structure and they are implicitly welded together by girth welding to form pipeline for oil/natural gas transport.

6. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Suzuki** (US 5,820,703)

Suzuki:

Suzuki discloses a martensitic stainless steel pipe with excellent weldability with the composition as shown in the comparative table above. Suzuki's pipes are designed for line pipe and/or oil well pipe (col. 3, lines 40-50) and the transportation of oil (col. 1, lines 5-15) and are designed to be welded together by circumferential welding at the time the pipe is laid down (col. 9, lines 53-60). Line pipe is produced by electric resistance seam welding (col. 7, lines 20-50).

Regarding claims 1-10, it would have been obvious to one of ordinary skill in the steel tubing, at the time of the invention, to form a martensitic stainless steel pipe having a heat-affected zone with the claimed alloying elements in the claimed ranges for the same reasons as stated in the rejections of claims 1-10 with respect to Kimura

Regarding claims 11-20, it would have been obvious to one of ordinary skill in steel tubing, at the time of the invention, to form a welded structure or a welded structure further welded to a member for the same reasons as stated in the rejections of claims 11-20 over Kimura above as the steel pipes of Suzuki's invention are designed to undergo circumferential welding during pipe lay-down to implicitly form a welded structure (col. 9, lines 53-60).

7. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Miyata** (US 6,464,802).

Miyata:

Miyata discloses a high chromium steel pipe for line pipes (Abstract) having improved toughness in a heat-affected zone (HAZ) having a composition as shown in the comparative table above. Miyata's steel pipe can be provided as line pipe material for the transport of oil and natural gas (col. 9, lines 1-35). Miyata suggests that line pipes require good results after girth welding to lay pipe (col. 1, lines 27-35) and tests the weldability of his pipe by forming a welded girth joint between two parent pipes to form a welded structure (col. 6, lines 10-19).

Regarding claims 1-10, it would have been obvious to one of ordinary skill in the steel tubing, at the time of the invention, to form a martensitic stainless steel pipe having a heat-affected zone with the claimed alloying elements in the claimed ranges for the same reasons as stated in the rejections of claims 1-10 with respect to Kimura

Regarding claims 11-20, it would have been obvious to one of ordinary skill in steel tubing, at the time of the invention, to form a welded structure or a welded structure further welded to a member for the same reasons as stated in the rejections of claims 11-20 over Kimura above as the steel pipes of Miyata's invention are designed to undergo girth welding during pipe lay-down to form a welded structure with an intermediate joint between parent pipes (col. 6, lines 10-19).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude"

granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1-20 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-5 of U.S. Patent No. 5,985,209. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons:

Regarding claims 1-10, it would have been obvious to one of ordinary skill in the steel tubing, at the time of the invention, to form a martensitic stainless steel pipe having a heat-affected zone with the claimed alloying elements in the claimed ranges as Kimura discloses a martensitic stainless steel for line pipe (which implicitly has a heat-affected zone when welded together for forming a continuous line pipe) with overlapping ranges of the claimed elements that is disclosed as effective for the same purpose as it has been held that there the

general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See In re Boesch, 205 USPQ 215 (CCPA 1980). Furthermore, MPEP 2144.05, para I states: "In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists."

With respect to the compositional formulas involving C_{sol} , it is well settled that there is no invention in the discovery of a general formula if it covers a composition described in the prior art, In re Cooper and Foley 1943 C.D. 357,553 O.G. 177., 57 USPQ 1 17, Taklatwalla v. Marburg, 620 O.G. 685, 1949 C.D. 77, and In re Pilling, 403 O.G. 513, 44 F(2) 878, 1931 C.D. 75. In absence of evidence to the contrary, the selection of the proportions of elements would appear to require no more than routine investigation by those ordinary skilled in the art. In re Austin, et al. 149 USPQ 685,688. It would have been obvious to one of ordinary skill in the art to select alloy compositions fulfilling the claimed compositional relationships from the alloy compositional ranges disclosed by Kimura.

Regarding claims 11-20, it would have been obvious to one of ordinary skill in steel tubing, at the time of the invention, to form a welded structure or a welded structure further welding to a member as one of ordinary skill would have welded pipes together to form such a pipeline for transporting oil and/or natural gas from Kimura. Line pipes are a welded structure and they are implicitly welded together by girth/circumferential welding to form pipeline for oil/natural gas transport.

9. **Claims 1-20** are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 6,464,802. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons:

Regarding claims 1-10, it would have been obvious to one of ordinary skill in the steel tubing, at the time of the invention, to form a martensitic stainless steel pipe having a heat-affected zone with the claimed alloying elements in the claimed ranges for the same reasons as stated in the obviousness-type double patenting rejections of claims 1-10 with respect to Kimura above.

Regarding claims 11-20, it would have been obvious to one of ordinary skill in steel tubing, at the time of the invention, to form a welded structure or a welded structure further welded to a member for the same reasons as stated in the obviousness-type double patenting rejections of claims 11-20 over Kimura above as the steel pipes of Miyata's invention are implicitly designed to be welded together to form a welded structure to form a final line pipe for transporting petroleum products (implicit in definition of "line pipe").

Conclusion

-- **Claims 1-20 (All pending) are rejected**
-- **No claims are allowed**

The rejections above rely on the references for all the teachings expressed in the text of the references and/or one of ordinary skill in the metallurgical art would have reasonably understood or implied from the texts of the references. To emphasize certain aspects of the prior art, only specific portions of the texts have been pointed out. Each reference as a whole should be reviewed in responding to the rejection, since other sections of the same reference and/or various combinations of the cited references may be relied on in future rejections in view of amendments.

All recited limitations in the instant claims have been met by the rejections as set forth above. Applicant is reminded that when amendment and/or revision is required, applicant should therefore specifically point out the support for any amendments made to the disclosure. See 37 C.F.R. § 1.121; 37 C.F.R. Part §41.37 (c)(1)(v); MPEP §714.02; and MPEP §2411.01(B).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark L. Shevin whose telephone number is (571) 270-3588 and fax number is (571) 270-4588. The examiner can normally be reached on Monday - Friday, 8:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V. King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark L. Shevin/

March 5th, 2009
10-587,807

/George Wyszomierski/
Primary Examiner
Art Unit 1793